



PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In the Application of:

SURINDER M. MAINI

CASE NO.: HT-3765 USNA

SERIAL NO.: 09/780,632

GROUP ART UNIT: 1771

FILED: FEBRUARY 9, 2001

EXAMINER: J. BOYD

**FOR: IMPROVED PROTECTIVE
APPAREL FABRIC AND GARMENT**

DECLARATION OF SURINDER M. MAINI
PURSUANT TO 37 CFR SECTION 1.132

Assistant Commissioner for Patents
Washington, D.C. 20231

Sir:

I, Surinder M. Maini, am a citizen of India, residing at 1073 A/A, Vasant Kunj New Delhi 110 070 INDIA

I declare as follows:

1. I am the inventor named in the subject application. I received my B.Tech degree from Indian Institute of Technology Delhi, New Delhi, India in 1986 and my Ph.D. degree from College of Textiles, North Carolina State University, Raleigh, NC, USA in 1994. I have been employed by E. I. du Pont de Nemours and Company since March 1998, and have been working with

I HEREBY CERTIFY THAT THIS PAPER IS BEING DEPOSITED WITH THE UNITED STATES POSTAL SERVICE WITH SUFFICIENT POSTAGE AS FIRST CLASS MAIL IN AN ENVELOPE ADDRESSED TO: ASST. COMMISSIONER FOR PATENTS, WASHINGTON, D.C. 20231, ON THIS DATE.

E.I. DuPont India Pvt. Ltd. since May 2002. I currently hold the position of Account Manager, India, DuPont Personal Protection.

2. I have reviewed the Final Office Action, dated May 5, 2004 and the Advisory Action, dated August 24, 2004 and I am aware that this declaration is being submitted to explain, as requested by the Examiner in the Advisory Action, why the inclusion randomly entangled loop structure yarns produce unexpected results.

The following text at page 2, lines 1-10 of the subject application was cited in the July 29, 2004 response to the Final Office Action.

The woven fabric of the present invention provides improved resistance to elevated temperature such as from a flame compared to a fabric using the same filaments but without entanglements or loops. Filaments may be used in the present invention of a thinner diameter resulting in a weight savings in the final fabric. This weight saving is sufficient in overcoming an added weight in the present invention due to an additional amount of filament needed per unit area due to the entanglements or loops.

There is a continuing demand for decreased weight in fire fighting fabrics without a decrease in fire-resistant properties. The random loop structure of the invention provides a fabric that is 3 to 25 percent higher in weight per unit length than a continuous filament yarn having the same composition but no entanglement or loops. Therefore, one of ordinary skill in the art would expect a firefighting garment made using the inventive fabric to weigh more and, therefore, be less desirable. However, the subject invention provides improved resistance to elevated temperatures. This in turn permits thinner diameter filaments to be employed resulting in a weight savings in the final fabric. This is achieved even though the random loop structure weighs more per unit length than does a filament of the same unit length that does not have the random looped structure.

3. All statements made herein of my own knowledge are true and all statements made on information and belief are believed to be

true; and further that these statements are made with the knowledge that willful false statements or the like so made are punishable by fine and imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

Nov. 1, 2004
Date

Surinder M. Maini
SURINDER M. MAINI